

SEQUENCE LISTING

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<120> Tereuin C-Terminal Associated Peptides (TCAP) And Methods And Uses
Thereof

<130> 2223-189

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<150> US 60/376,879

<151> 2002-05-02

<150> US 60/377,231

<151> 2002-05-03

<150> US 60/424,016

<151> 2002-11-06

<160> 136

<170> PatentIn version 3.1

<210> 1

<211> 1490

<212> DNA

<213> Artificial Sequence

<220>

<223> Rainbow Trout Ten M3 carboxy termini'

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<210> 2

<211> 756

<212> DNA

<213> Artificial Sequence

<220>

<223> Rainbow Trout Ten M3 coding sequence of carboxy termini of Ten M3

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ttcatcaaga ccagcctccc ggagagcgac ctgggagcgc tgaggctgac aagcgggagg      360
aagtcgctgg agaacggaag tcaacgtgac tgtgtcccag tccaccaccg tgggtgaacgg      420
cagaaccggc gcttcgccga cgtggagctg cagtacggcg ctctagcgct ccacgtgcgc      480
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ctgtggacgg agggggagaa gaggcagctg ctgagcggga ggaagggttct gggctacgac      660
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<210> 3

<211> 251

<212> PRT

<213> Artificial Sequence

<220>

<223> Rainbow Trout Ten M3 carboxy termini of Ten M3

<400> 3

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20 25 30

Asn Arg Glu Lys Pro Trp Leu Trp Phe Ala Thr Ala Lys Ser Leu Ile
35 40 45

Gly Lys Gly Val Met Leu Ala Val Thr Gln Gly Arg Val Val Thr Asn
50 55 60

Ala Leu Asn Ile Ala Asn Glu Asp Cys Ile Lys Val Ala Ala Val Leu
65 70 75 80

Asn Asn Ala Phe Tyr Leu Glu Asp Leu His Phe Thr Val Glu Gly Arg
85 90 95

Asp Thr His Tyr Phe Ile Lys Thr Ser Leu Pro Glu Ser Asp Leu Gly
100 105 110

Ala Leu Arg Leu Thr Ser Gly Arg Lys Ser Leu Glu Asn Gly Val Asn
115 120 125

Val Thr Val Ser Gln Ser Thr Thr Val Val Asn Gly Arg Thr Arg Arg
130 135 140

Phe Ala Asp Val Glu Leu Gln Tyr Gly Ala Leu Ala Leu His Val Arg
145 150 155 160

Tyr Gly Met Thr Leu Asp Glu Glu Lys Ala Arg Val Leu Glu Gln Ala
165 170 175

Arg Gln Lys Ala Leu Ser Ser Ala Trp Ser Arg Glu Gln Gln Arg Val
180 185 190

Arg Glu Gly Glu Glu Gly Val Arg Leu Trp Thr Glu Gly Glu Lys Arg
195 200 205

Gln Leu Leu Ser Gly Arg Lys Val Leu Gly Tyr Asp Gly Tyr Tyr Val
210 215 220

Leu Ser Ile Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn Ile
225 230 235 240

Gln Phe Leu Arg Gln Ser Glu Ile Gly Lys Arg

245

250

<210> 4

<211> 252

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse Ten M1

<400> 4

Met Ile Leu Gly Ile Gln Cys Glu Leu Gln Lys Gln Leu Arg Asn Phe
1 5 10 15

Ile Ser Leu Asp Gln Leu Pro Met Thr Pro Gln Tyr Asn Glu Gly Arg
20 25 30

Cys Leu Glu Gly Gly Lys Gln Pro Arg Phe Ala Ala Val Pro Ser Val
35 40 45

Phe Gly Lys Gly Ile Lys Phe Ala Ile Lys Glu Gly Ile Val Thr Ala
50 55 60

Asp Ile Ile Gly Val Ala Asn Glu Asp Ser Arg Arg Leu Ala Ala Ile
65 70 75 80

Leu Asn Asn Ala His Tyr Leu Glu Asn Leu His Phe Thr Ile Glu Gly
85 90 95

Arg Asp Thr His Tyr Phe Ile Lys Leu Gly Ser Leu Glu Glu Asp Leu
100 105 110

Val Leu Ile Gly Asn Thr Gly Gly Arg Arg Ile Leu Glu Asn Gly Val
115 120 125

Asn Val Thr Val Ser Gln Met Thr Ser Val Leu Asn Gly Arg Thr Arg
130 135 140

Arg Phe Ala Asp Ile Gln Leu Gln His Gly Ala Leu Cys Phe Asn Ile
145 150 155 160

Arg Tyr Gly Thr Thr Val Glu Glu Glu Lys Asn His Val Leu Glu Met
165 170 175

Ala Arg Gln Arg Ala Val Ala Gln Ala Trp Thr Gln Glu Gln Arg Arg
180 185 190

Leu Gln Glu Gly Glu Glu Gly Thr Arg Val Trp Thr Glu Gly Glu Lys
195 200 205

Gln Gln Leu Leu Gly Thr Gly Arg Val Gln Gly Tyr Asp Gly Tyr Phe
210 215 220

Val Leu Ser Val Glu Gln Tyr Leu Glu Leu Ser Asp Ser Ala Asn Asn
225 230 235 240

Ile His Phe Met Arg Gln Ser Glu Ile Gly Arg Arg
245 250

<210> 5

<211> 253

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse Ten M2

<400> 5

Leu Ile Thr Gly Val Gln Gln Thr Thr Glu Arg His Asn Gln Ala Phe
1 5 10 15

Leu Ala Leu Glu Gly Gln Val Ile Thr Lys Lys Leu His Ala Ser Ile
20 25 30

Arg Glu Lys Ala Gly His Trp Phe Ala Thr Thr Thr Pro Ile Ile Gly
35 40 45

Lys Gly Ile Met Phe Ala Ile Lys Glu Gly Arg Val Thr Thr Gly Val
50 55 60

Ser Ser Ile Ala Ser Glu Asp Ser Arg Lys Val Ala Ser Val Leu Asn
65 70 75 80

Asn Ala Tyr Tyr Leu Asp Lys Met His Tyr Ser Ile Glu Gly Lys Asp
85 90 95

Thr His Tyr Phe Val Lys Ile Gly Ala Ala Asp Gly Asp Leu Val Thr
100 105 110

Leu Gly Thr Thr Ile Gly Arg Lys Val Leu Glu Ser Gly Val Asn Val
115 120 125

Thr Val Ser Gln Pro Thr Leu Leu Val Asn Gly Arg Thr Arg Arg Phe
130 135 140

Thr Asn Ile Glu Phe Gln Tyr Ser Thr Leu Leu Leu Ser Ile Arg Tyr
145 150 155 160

Gly Leu Thr Pro Asp Thr Leu Asp Glu Glu Lys Ala Arg Val Leu Asp
165 170 175

Gln Ala Gly Gln Arg Ala Leu Gly Thr Ala Trp Ala Lys Glu Gln Gln
180 185 190

Lys Ala Arg Asp Gly Arg Glu Gly Ser Arg Leu Trp Thr Glu Gly Glu
195 200 205

Lys Gln Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Glu Gly Tyr
210 215 220

Tyr Val Leu Pro Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ser Ser
225 230 235 240

Asn Ile Gln Phe Leu Arg Gln Asn Glu Met Gly Lys Arg
245 250

<210> 6

<211> 251

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse Ten M3

<400> 6

Pro Ile Phe Gly Val Gln Gln Gln Val Ala Arg Gln Ala Lys Ala Phe
1 5 10 15

Leu Ser Leu Gly Lys Met Ala Glu Val Gln Val Ser Arg Arg Lys Ala
20 25 30

Gly Ala Glu Gln Ser Trp Leu Trp Phe Ala Thr Val Lys Ser Leu Ile
35 40 45

Gly Lys Gly Val Met Leu Ala Val Ser Gln Gly Arg Val Gln Thr Asn
50 55 60

Val Leu Asn Ile Ala Asn Glu Asp Cys Ile Lys Val Ala Ala Val Leu
65 70 75 80

Asn Asn Ala Phe Tyr Leu Glu Asn Leu His Phe Thr Ile Glu Gly Lys
85 90 95

Asp Thr His Tyr Phe Ile Lys Thr Thr Thr Pro Glu Ser Asp Leu Gly
100 105 110

Thr Leu Arg Leu Thr Ser Gly Arg Lys Ala Leu Glu Asn Gly Ile Asn
115 120 125

Val Thr Val Ser Gln Ser Thr Thr Val Val Asn Gly Arg Thr Arg Arg
130 135 140

Phe Ala Asp Val Glu Met Gln Phe Gly Ala Leu Ala Leu His Val Arg
145 150 155 160

Tyr Gly Met Thr Leu Asp Glu Glu Lys Ala Arg Ile Leu Glu Gln Ala
165 170 175

Arg Gln Arg Ala Leu Ala Arg Ala Trp Ala Arg Glu Gln Gln Arg Val
180 185 190

Arg Asp Gly Glu Glu Gly Ala Arg Leu Trp Thr Glu Gly Glu Lys Arg
195 200 205

Gln Leu Leu Ser Ala Gly Lys Val Gln Gly Tyr Asp Gly Tyr Tyr Val
210 215 220

Leu Ser Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn Ile

225 230 235 240

Gln Phe Leu Arg Gln Ser Glu Ile Gly Lys Arg
245 250

<210> 7

<211> 243

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse Ten M4

<400> 7

Ser Ile Leu Gly Val Gln Cys Glu Val Gln Lys Gln Leu Lys Ala Phe
1 5 10 15

Val Thr Leu Glu Arg Phe Asp Gln Leu Tyr Gly Ser Thr Ile Thr Ser
20 25 30

Cys Gln Gln Ala Pro Glu Thr Lys Lys Phe Ala Ser Ser Gly Ser Ile
35 40 45

Phe Gly Lys Gly Val Lys Phe Ala Leu Lys Asp Gly Arg Val Thr Thr
50 55 60

Asp Ile Ile Ser Val Ala Asn Glu Asp Gly Arg Arg Ile Ala Ala Ile
65 70 75 80

Leu Asn Asn Ala His Tyr Leu Glu Asn Leu His Phe Thr Ile Asp Gly
85 90 95

Val	Asp	Thr	His	Tyr	Phe	Val	Lys	Pro	Gly	Pro	Ser	Glu	Gly	Asp	Leu
			100					105					110		

Ala Ile Leu Gly Leu Ser Gly Gly Arg Arg Thr Leu Glu Asn Gly Val
115 120 125

Asn	Val	Thr	Val	Ser	Gln	Ile	Asn	Thr	Met	Leu	Ile	Gln	Leu	Gln	Tyr
130						135					140				

Arg Ala Leu Cys Leu Asn Thr Arg Tyr Gly Thr Thr Val Asp Glu Glu
145 150 155 160

Lys Val Arg Val Leu Glu Leu Ala Arg Gln Arg Ala Val Arg Gln Ala
165 170 175

Trp Ala Arg Glu Gln Gln Arg Leu Arg Glu Gly Glu Glu Gly Leu Arg
180 185 190

Ala Trp Thr Asp Gly Glu Lys Gln Gln Val Leu Asn Thr Gly Arg Val
195 200 205

Gln Gly Tyr Asp Gly Phe Phe Val Thr Ser Val Glu Gln Tyr Pro Glu
210 215 220

Leu Ser Asp Ser Ala Asn Asn Ile His Phe Met Arg Gln Ser Glu Met
225 230 235 240

Gly Arg Arg

<210> 8

<211> 252

<212> PRT

<213> Artificial Sequence

<220>

<223> Human Ten M1

<400> 8

Thr Ile Leu Gly Ile Gln Cys Glu Leu Gln Lys Gln Leu Arg Asn Phe
1 5 10 15

Ile Ser Leu Asp Gln Leu Pro Met Thr Pro Arg Tyr Asn Asp Gly Arg
20 25 30

Cys Leu Glu Gly Gly Lys Gln Pro Arg Phe Ala Ala Val Pro Ser Val
35 40 45

Phe Gly Lys Gly Ile Lys Phe Ala Ile Lys Asp Gly Ile Val Thr Ala
50 55 60

Asp Ile Ile Gly Val Ala Asn Glu Asp Ser Arg Arg Leu Ala Ala Ile
65 70 75 80

Leu Asn Asn Ala His Tyr Leu Glu Asn Leu His Phe Thr Ile Glu Gly
85 90 95

Arg Asp Thr His Tyr Phe Ile Lys Leu Gly Ser Leu Glu Glu Asp Leu
100 105 110

Val Leu Ile Gly Asn Thr Gly Gly Arg Arg Ile Leu Glu Asn Gly Val
115 120 125

Asn Val Thr Val Ser Gln Met Thr Ser Val Leu Asn Gly Arg Thr Arg
130 135 140

Arg Phe Ala Asp Ile Gln Leu Gln His Gly Ala Leu Cys Phe Asn Ile
145 150 155 160

Arg Tyr Gly Thr Thr Val Glu Glu Glu Lys Asn His Val Leu Glu Ile
165 170 175

Ala Arg Gln Arg Ala Val Ala Gln Ala Trp Thr Lys Glu Gln Arg Arg
180 185 190

Leu Gln Glu Gly Glu Glu Gly Ile Arg Ala Trp Thr Glu Gly Glu Lys
195 200 205

Gln Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Asp Gly Tyr Phe
210 215 220

Val Leu Ser Val Glu Gln Tyr Leu Glu Leu Ser Asp Ser Ala Asn Asn
225 230 235 240

Ile His Phe Met Arg Gln Ser Glu Ile Gly Arg Arg
245 250

<210> 9

<211> 253

<212> PRT

<213> Artificial Sequence

<220>

<223> Human Ten M2

<400> 9

Leu Ile Thr Gly Val Gln Gln Thr Thr Glu Arg His Asn Gln Ala Phe
1 5 10 15

Met Ala Leu Glu Gly Gln Val Ile Thr Lys Lys Leu His Ala Ser Ile
20 25 30

Arg Glu Lys Ala Gly His Trp Phe Ala Thr Thr Thr Pro Ile Ile Gly
35 40 45

Lys Gly Ile Met Phe Ala Ile Lys Glu Gly Arg Val Thr Thr Gly Val
50 55 60

Ser Ser Ile Ala Ser Glu Asp Ser Arg Lys Val Ala Ser Val Leu Asn
65 70 75 80

Asn Ala Tyr Tyr Leu Asp Lys Met His Tyr Ser Ile Glu Gly Lys Asp
85 90 95

Thr His Tyr Phe Val Lys Ile Gly Ser Ala Asp Gly Asp Leu Val Thr
100 105 110

Leu Gly Thr Thr Ile Gly Arg Lys Val Leu Glu Ser Gly Val Asn Val
115 120 125

Thr Val Ser Gln Pro Thr Leu Leu Val Asn Gly Arg Thr Arg Arg Phe
130 135 140

Thr Asn Ile Glu Phe Gln Tyr Ser Thr Leu Leu Leu Ser Ile Arg Tyr
145 150 155 160

Gly Leu Thr Pro Asp Thr Leu Asp Glu Glu Lys Ala Arg Val Leu Asp
165 170 175

Gln Ala Arg Gln Arg Ala Leu Gly Thr Ala Trp Ala Lys Glu Gln Gln
180 185 190

Lys Ala Arg Asp Gly Arg Glu Gly Ser Arg Leu Trp Thr Glu Gly Glu
195 200 205

Lys Gln Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Glu Gly Tyr

210	215	220
Tyr Val Leu Pro Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ser Ser		
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Asn Ile Gln Phe Leu Arg Gln Asn Glu Met Gly Lys Arg		
	245	250
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<400> 10		
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	20	25 30
Gly Gly Ala Gln Ser Trp Leu Trp Phe Ala Thr Val Lys Ser Leu Ile		
	35	40 45
Gly Lys Gly Val Met Leu Ala Val Ser Gln Gly Arg Val Gln Thr Asn		
	50	55 60
Val Leu Asn Ile Ala Asn Glu Asp Cys Ile Lys Val Ala Ala Val Leu		
65	70	75 80
Asn Asn Ala Phe Tyr Leu Glu Asn Leu His Phe Thr Ile Glu Gly Lys		
	85	90 95
Asp Thr His Tyr Phe Ile Lys Thr Thr Thr Pro Glu Ser Asp Leu Gly		
	100	105 110
Thr Leu Arg Leu Thr Ser Gly Arg Lys Ala Leu Glu Asn Gly Ile Asn		
	115	120 125

Val Thr Val Ser Gln Ser Thr Thr Val Val Asn Gly Arg Thr Arg Arg
130 135 140

Phe Ala Asp Val Glu Met Gln Phe Gly Ala Leu Ala Leu His Val Arg
145 150 155 160

Tyr Gly Met Thr Leu Asp Glu Glu Lys Ala Arg Ile Leu Glu Gln Ala
165 170 175

Arg Gln Arg Ala Leu Ala Arg Ala Trp Ala Arg Glu Gln Gln Arg Val
180 185 190

Arg Asp Gly Glu Glu Gly Ala Arg Leu Trp Thr Glu Gly Glu Lys Arg
195 200 205

Gln Leu Leu Ser Ala Gly Lys Val Gln Gly Tyr Asp Gly Tyr Tyr Val
210 215 220

Leu Ser Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn Ile
225 230 235 240

Gln Phe Leu Arg Gln Ser Glu Ile Gly Arg Arg
245 250

<210> 11

<211> 252

<212> PRT

<213> Artificial Sequence

<220>

<223> Human Ten M4

<400> 11

Ser Ile Leu Gly Val Gln Cys Glu Val Gln Lys Gln Leu Lys Ala Phe
1 5 10 15

Val Thr Leu Glu Arg Phe Asp Gln Leu Tyr Gly Ser Thr Ile Thr Ser
20 25 30

Cys Leu Gln Ala Pro Lys Thr Lys Lys Phe Ala Ser Ser Gly Ser Val
35 40 45

Phe Gly Lys Gly Val Lys Phe Ala Leu Lys Asp Gly Arg Val Thr Thr
50 55 60

Asp Ile Ile Ser Val Ala Asn Glu Asp Gly Arg Arg Val Ala Ala Ile
65 70 75 80

Leu Asn His Ala His Tyr Leu Glu Asn Leu His Phe Thr Ile Asp Gly
85 90 95

Val Asp Thr His Tyr Phe Val Lys Pro Gly Pro Ser Glu Gly Asp Leu
100 105 110

Ala Ile Leu Gly Leu Ser Gly Gly Arg Arg Thr Leu Glu Asn Gly Val
115 120 125

Asn Val Thr Val Ser Gln Ile Asn Thr Val Leu Ser Gly Arg Thr Arg
130 135 140

Arg Tyr Thr Asp Ile Gln Leu Gln Tyr Gly Ala Leu Cys Leu Asn Thr
145 150 155 160

Arg Tyr Gly Thr Thr Leu Asp Glu Glu Lys Ala Arg Val Leu Glu Leu
165 170 175

Ala Arg Gln Arg Ala Val Arg Gln Ala Trp Ala Arg Glu Gln Gln Arg
180 185 190

Leu Arg Glu Gly Glu Glu Gly Leu Arg Ala Trp Thr Glu Gly Glu Lys
195 200 205

Gln Gln Val Leu Ser Thr Gly Arg Val Gln Gly Tyr Asp Gly Phe Phe
210 215 220

Val Ile Ser Val Glu Gln Tyr Pro Glu Leu Ser Asp Ser Ala Asn Asn
225 230 235 240

Ile His Phe Met Arg Gln Ser Glu Met Gly Arg Arg
245 250

<210> 12

<211> 252

<212> PRT

<213> Artificial Sequence

<220>

<223> Zebrafish Ten M3

<400> 12

Ser Ile Ser Gly Val Gln Gln Glu Val Met Arg Gln Ala Lys Ala Phe
1 5 10 15

Leu Ser Phe Glu Arg Met Pro Glu Ile Gln Leu Ser Arg Arg Arg Ser
20 25 30

Ser Arg Glu Lys Pro Trp Leu Trp Phe Ala Thr Val Lys Ser Leu Ile
35 40 45

Gly Lys Gly Val Met Leu Ala Ile Thr Ser Lys Gly Gln Val Ala Thr
50 55 60

Asn Ala Leu Asn Ile Ala Asn Glu Asp Cys Ile Lys Val Val Thr Val
65 70 75 80

Leu Asn Asn Ala Phe Tyr Leu Glu Asp Leu His Phe Thr Val Glu Gly
85 90 95

Arg Asp Thr His Tyr Phe Ile Lys Thr Ser Leu Pro Glu Ser Asp Leu
100 105 110

Gly Ala Leu Arg Leu Thr Ser Gly Arg Lys Ser Leu Glu Asn Gly Val
115 120 125

Asn Val Thr Val Ser Gln Ser Thr Thr Val Val Asn Gly Arg Thr Arg
130 135 140

Arg Phe Ala Asp Val Glu Leu Gln Tyr Gly Ala Leu Ala Leu His Val
145 150 155 160

Arg Tyr Gly Met Thr Leu Asp Glu Glu Lys Ala Arg Val Leu Glu Gln
165 170 175

Ala Arg Gln Arg Ala Leu Ser Ser Ala Trp Ala Arg Glu Gln Gln Arg
180 185 190

Val Arg Asp Gly Glu Glu Gly Val Arg Leu Trp Thr Glu Gly Glu Lys

195		200		205
Arg Gln Leu Leu Ser Ser Gly Lys Val Leu Gly Tyr Asp Gly Tyr Tyr				
210		215		220
Val Leu Ser Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn				
225		230		235 240
Val Gln Phe Leu Arg Gln Ser Glu Ile Gly Lys Arg				
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<210> 13

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Rainbow Trout TCAP3 (40a.a.)

<400> 13

Gln Leu Leu Ser Gly Arg Lys Val Leu Gly Tyr Asp Gly Tyr Tyr Val
1 5 10 15
Leu Ser Ile Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn Ile
20 25 30
Gln Phe Leu Arg Gln Ser Glu Ile
35 40

<210> 14

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Rainbow Trout TCAP 3 (41a.a.)

<400> 14

Arg Gln Leu Leu Ser Gly Arg Lys Val Leu Gly Tyr Asp Gly Tyr Tyr
1 5 10 15

Val Leu Ser Ile Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn
20 25 30

Ile Gln Phe Leu Arg Gln Ser Glu Ile
35 40

<210> 15

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Rainbow Trout preTCAP3 (43 a.a.)

<400> 15

Gln Leu Leu Ser Gly Arg Lys Val Leu Gly Tyr Asp Gly Tyr Tyr Val
1 5 10 15

Leu Ser Ile Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn Ile
20 25 30

Gln Phe Leu Arg Gln Ser Glu Ile Gly Lys Arg
35 40

<210> 16

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Rainbow Trout preTCAP3 (44 a.a.)

<400> 16

Arg Gln Leu Leu Ser Gly Arg Lys Val Leu Gly Tyr Asp Gly Tyr Tyr
1 5 10 15

Val Leu Ser Ile Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn
20 25 30

Ile Gln Phe Leu Arg Gln Ser Glu Ile Gly Lys Arg
35 40

<210> 17

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Rainbow Trout TCAP3 (120 n.a.)

<400> 17
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cagtaccccg agctagcaga ctccgctaac aacatccagt tcctcaggca gagcgaaata 120

<210> 18

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Rainbow Trout TCAP3 (123 n.a.)

<400> 18
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gagcagtacc ccgagctagc agactccgct aacaacatcc agttcctcag gcagagcgaa 120
ata 123

<210> 19

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Rainbow Trout preTCAP3 (129 n.a.)

<400> 19

cagctgctga gcgggaggaa ggttctgggc tacgacgggt actacgtcct ctccatagag 60

cagtaccccg agctagcaga ctccgctaac aacatccagt tcctcaggca gagcgaaata 120

gggaagagg 129

<210> 20

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Rainbow Trout preTCAP3 (132 n.a.)

<400> 20

aggcagctgc tgagcgggag gaaggttctg ggctacgacg ggtactacgt cctctccata 60

gagcagtacc ccgagctagc agactccgct aacaacatcc agttcctcag gcagagcgaa 120

ataggaaga gg 132

<210> 21

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Zebrafish TCAP3 (40 a.a.)

<400> 21

Gln Leu Leu Ser Ser Gly Lys Val Leu Gly Tyr Asp Gly Tyr Tyr Val
1 5 10 15

Leu Ser Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn Val
20 25 30

Gln Phe Leu Arg Gln Ser Glu Ile
35 40

<210> 22

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Zebrafish TCAP3 (41 a.a.)

<400> 22

Arg Gln Leu Leu Ser Ser Gly Lys Val Leu Gly Tyr Asp Gly Tyr Tyr
1 5 10 15

Val Leu Ser Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn
20 25 30

Val Gln Phe Leu Arg Gln Ser Glu Ile
35 40

<210> 23

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Zebrafish preTCAP3 (43 a.a.)

<400> 23

Gln Leu Leu Ser Ser Gly Lys Val Leu Gly Tyr Asp Gly Tyr Tyr Val
1 5 10 15

Leu Ser Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn Val
20 25 30

Gln Phe Leu Arg Gln Ser Glu Ile Gly Lys Arg
35 40

<210> 24

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Zebrafish preTCAP3 (44 a.a.)

<400> 24

Arg	Gln	Leu	Leu	Ser	Ser	Gly	Lys	Val	Leu	Gly	Tyr	Asp	Gly	Tyr	Tyr
1				5					10					15	

Val	Leu	Ser	Val	Glu	Gln	Tyr	Pro	Glu	Leu	Ala	Asp	Ser	Ala	Asn	Asn
			20					25					30		

Val	Gln	Phe	Leu	Arg	Gln	Ser	Glu	Ile	Gly	Lys	Arg
		35					40				

<210> 25

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Zebrafish TCAP3 (120 n.a.)

<400> 25

cagttgctca	gctctgggaa	ggtgctgggt	tacgatgggt	actatgtact	atcagtggag	60
caataccctg	aactggccga	cagtgccaac	aatgtccagt	tcttgaggca	gagtgagata	120

<210> 26

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Zebrafish TCAP3 (123 n.a.)

<400> 26

aggcagttgc tcagctctgg gaaggtgctg ggttacgatg gttactatgt actatcagtg	60
gagcaatacc ctgaactggc cgacagtgcc aacaatgtcc agttcttgag gcagagtgag	120
ata	123

<210> 27

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Zebrafish TCAP3 (129 n.a.)

<400> 27

cagttgctca gctctgggaa ggtgctgggt tacgatgggt actatgtact atcagtggag	60
caataccctg aactggccga cagtgccaac aatgtccagt tcttgaggca gagtgagata	120
gggaagagg	129

<210> 28

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Zebrafish preTCAP3 (132 n.a.)

<400> 28

aggcagttgc tcagctctgg gaaggtgctg ggttacgatg gttactatgt actatcagtg	60
gagcaatacc ctgaactggc cgacagtgcc aacaatgtcc agttcttgag gcagagtgag	120
atagggaaga gg	132

<210> 29

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Zebrafish TCAP4 (40 a.a.)

<400> 29

Gln Leu Leu Ser Ser Gly Arg Val Gln Gly Tyr Glu Gly Phe Tyr Ile
1 5 10 15

Val Ser Val Asp Gln Phe Pro Glu Leu Thr Asp Asn Ile Asn Asn Val
20 25 30

His Phe Trp Arg Gln Thr Glu Met
35 40

<210> 30

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Zebrafish TCAP4 (41 a.a.)

<400> 30

Gln Gln Leu Leu Ser Ser Gly Arg Val Gln Gly Tyr Glu Gly Phe Tyr
1 5 10 15

Ile Val Ser Val Asp Gln Phe Pro Glu Leu Thr Asp Asn Ile Asn Asn
20 25 30

Val His Phe Trp Arg Gln Thr Glu Met
35 40

<210> 31

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Zebrafish preTCAP4 (43 a.a.)

<400> 31

Gln Leu Leu Ser Ser Gly Arg Val Gln Gly Tyr Glu Gly Phe Tyr Ile
1 5 10 15

Val Ser Val Asp Gln Phe Pro Glu Leu Thr Asp Asn Ile Asn Asn Val
20 25 30

His Phe Trp Arg Gln Thr Glu Met Gly Arg Arg
35 40

<210> 32

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Zebrafish preTCAP4 (44 a.a.)

<400> 32

Gln Gln Leu Leu Ser Ser Gly Arg Val Gln Gly Tyr Glu Gly Phe Tyr
1 5 10 15

Ile Val Ser Val Asp Gln Phe Pro Glu Leu Thr Asp Asn Ile Asn Asn
20 25 30

Val His Phe Trp Arg Gln Thr Glu Met Gly Arg Arg
35 40

<210> 33

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Zebrafish TCAP4 (120 n.a.)

<400> 33

cagctcctaa gctctggacg tgtacagggc tacgaaggct tctacatagt atcagtcgac 60

cagttcccag agttgactga caacataaat aacgtccatt tctggcgaca gactgagatg 120

<210> 34

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Zebrafish TCAP4 (123 n.a.)

<400> 34

cagcagctcc taagctctgg acgtgtacag ggctacgaag gcttctacat agtatcagtc 60

gaccagttcc cagagttgac tgacaacata aataacgtcc atttctggcg acagactgag 120

atg 123

<210> 35

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Zebrafish preTCAP4 (129 n.a.)

<400> 35

cagctcctaa gctctggacg tgtacagggc tacgaaggct tctacatagt atcagtcgac 60

cagttcccag agttgactga caacataaat aacgtccatt tctggcgaca gactgagatg 120

ggacgcagg 129

<210> 36

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Zebrafish preTCAP4 (132 n.a.)

<400> 36

cagcagctcc taagctctgg acgtgtacag ggctacgaag gcttctacat agtatcagtc 60
gaccagttcc cagagttgac tgacaacata aataacgtcc atttctggcg acagactgag 120
atgggacgca gg 132

<210> 37

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse TCAP1 (40 a.a.)

<400> 37

Gln Leu Leu Gly Thr Gly Arg Val Gln Gly Tyr Asp Gly Tyr Phe Val
1 5 10 15

Leu Ser Val Glu Gln Tyr Leu Glu Leu Ser Asp Ser Ala Asn Asn Ile
20 25 30

His Phe Met Arg Gln Ser Glu Ile
35 40

<210> 38

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse TCAP1 (41 a.a.)

<400> 38

Gln Gln Leu Leu Gly Thr Gly Arg Val Gln Gly Tyr Asp Gly Tyr Phe
1 5 10 15

Val Leu Ser Val Glu Gln Tyr Leu Glu Leu Ser Asp Ser Ala Asn Asn
20 25 30

Ile His Phe Met Arg Gln Ser Glu Ile
35 40

<210> 39

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse preTCAP1 (43 a.a.)

<400> 39

Gln Leu Leu Gly Thr Gly Arg Val Gln Gly Tyr Asp Gly Tyr Phe Val
1 5 10 15

Leu Ser Val Glu Gln Tyr Leu Glu Leu Ser Asp Ser Ala Asn Asn Ile
20 25 30

His Phe Met Arg Gln Ser Glu Ile Gly Arg Arg
35 40

<210> 40

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse preTCAP1 (44 a.a.)

<400> 40

Gln Gln Leu Leu Gly Thr Gly Arg Val Gln Gly Tyr Asp Gly Tyr Phe
1 5 10 15

Val Leu Ser Val Glu Gln Tyr Leu Glu Leu Ser Asp Ser Ala Asn Asn
20 25 30

Ile His Phe Met Arg Gln Ser Glu Ile Gly Arg Arg
35 40

<210> 41

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse TCAP1 (120 n.a.)

<400> 41
cagcttttgg gcaccgggag ggtgcagggg tatgatgggt attttgtctt gtctgttgag 60
cagtatttag aactttcaga cagtgccaac aatattcact tcatgagaca gagtgaaata 120

<210> 42

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse TCAP1 (123 n.a.)

<400> 42
cagcagcttt tgggcaccgg gaggggtgcag gggatatgatg ggtattttgt cttgtctgtt 60
gagcagtatt tagaactttc agacagtgcc aacaatattc acttcatgag acagagtgaa 120
ata 123

<210> 43

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse preTCAP1 (129 n.a.)

<400> 43

cagcttttgg gcaccgggag ggtgcagggg tatgatgggt attttgtctt gtctgttgag 60

cagtatttag aactttcaga cagtgccaac aatattcact tcatgagaca gagtgaaata 120

ggcaggagg 129

<210> 44

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse preTCAP1 (132 n.a.)

<400> 44

cagcagcttt tgggcaccgg gaggggtgcag gggatatgatg ggtattttgt cttgtctgtt 60

gagcagtatt tagaactttc agacagtgcc aacaatattc acttcatgag acagagtgaa 120

ataggcagga gg 132

<210> 45

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse TCAP2 (40 a.a.)

<400> 45

Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Glu Gly Tyr Tyr Val
1 5 10 15

Leu Pro Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ser Ser Asn Ile
20 25 30

Gln Phe Leu Arg Gln Asn Glu Ile
35 40

<210> 46

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse TCAP2 (41 a.a.)

<400> 46

Gln Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Glu Gly Tyr Tyr
1 5 10 15

Val Leu Pro Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ser Ser Asn
20 25 30

Ile Gln Phe Leu Arg Gln Asn Glu Met
35 40

<210> 47

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse preTCAP2 (43 a.a)

<400> 47

Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Glu Gly Tyr Tyr Val
1 5 10 15

Leu Pro Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ser Ser Asn Ile
20 25 30

Gln Phe Leu Arg Gln Asn Glu Met Gly Lys Arg
35 40

<210> 48

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse preTCAP2 (44 a.a.)

<400> 48

Gln Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Glu Gly Tyr Tyr
1 5 10 15

Val Leu Pro Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ser Ser Asn
20 25 30

Ile Gln Phe Leu Arg Gln Asn Glu Met Gly Lys Arg
35 40

<210> 49

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse TCAP2 (120 n.a.)

<400> 49

caactcctga gcacgggacg ggtacaaggt tatgagggct attacgtact tccgggtggaa 60

cagtacccgg agctggcaga cagtagcagc aacatccagt tcttaagaca gaatgagagg 120

<210> 50

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse TCAP 2 (123 n.a.)

<400> 50
cagcaactcc tgagcacggg acgggtacaa ggttatgagg gctattacgt acttccggtg 60
gaacagtacc cggagctggc agacagtagc agcaacatcc agttcttaag acagaatgag 120
atg 123

<210> 51

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse preTCAP2 (129 n.a.)

<400> 51
caactcctga gcacgggacg ggtacaaggt tatgagggct attacgtact tccggtggaa 60
cagtaccccg agctggcaga cagtagcagc aacatccagt tcttaagaca gaatgagatg 120
ggaaagagg 129

<210> 52

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse preTCAP2 (132 n.a.)

<400> 52
cagcaactcc tgagcacggg acgggtacaa ggttatgagg gctattacgt acttccggtg 60
gaacagtacc cggagctggc agacagtagc agcaacatcc agttcttaag acagaatgag 120
atgggaaaga gg 132

<210> 53

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse TCAP3 (40 a.a.)

<400> 53

Gln	Leu	Leu	Ser	Ala	Gly	Lys	Val	Gln	Gly	Tyr	Asp	Gly	Tyr	Tyr	Val
1				5					10					15	

Leu	Ser	Val	Glu	Gln	Tyr	Pro	Glu	Leu	Ala	Asp	Ser	Ala	Asn	Asn	Ile
			20					25					30		

Gln	Phe	Leu	Arg	Gln	Ser	Glu	Ile
		35					40

<210> 54

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse TCAP3 (41 a..a)

<400> 54

Arg	Gln	Leu	Leu	Ser	Ala	Gly	Lys	Val	Gln	Gly	Tyr	Asp	Gly	Tyr	Tyr
1				5					10					15	

Val	Leu	Ser	Val	Glu	Gln	Tyr	Pro	Glu	Leu	Ala	Asp	Ser	Ala	Asn	Asn
			20					25					30		

Ile	Gln	Phe	Leu	Arg	Gln	Ser	Glu	Ile
		35						40

<210> 55

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse preTCAP3 (43 a.a.)

<400> 55

Gln	Leu	Leu	Ser	Ala	Gly	Lys	Val	Gln	Gly	Tyr	Asp	Gly	Tyr	Tyr	Val
1				5					10					15	

Leu	Ser	Val	Glu	Gln	Tyr	Pro	Glu	Leu	Ala	Asp	Ser	Ala	Asn	Asn	Ile
			20					25					30		

Gln	Phe	Leu	Arg	Gln	Ser	Glu	Ile	Gly	Lys	Arg
		35					40			

<210> 56

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse preTCAP3 (44 a.a.)

<400> 56

Arg	Gln	Leu	Leu	Ser	Ala	Gly	Lys	Val	Gln	Gly	Tyr	Asp	Gly	Tyr	Tyr
1				5					10					15	

Val	Leu	Ser	Val	Glu	Gln	Tyr	Pro	Glu	Leu	Ala	Asp	Ser	Ala	Asn	Asn
			20					25					30		

Ile	Gln	Phe	Leu	Arg	Gln	Ser	Glu	Ile	Gly	Lys	Arg
		35					40				

<210> 57

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse TCAP3 (120 n.a.)

<400> 57

cagctgctga gcgctggcaa ggtgcagggc tacgatgggt actacgtact gtcgggtggag 60

cagtaccccc agctggctga cagtgccaac aacatccagt tcttgcgaca aagtgagatc 120

<210> 58

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse TCAP3 (123 n.a.)

<400> 58

cggcagctgc tgagcgctgg caaggtgcag ggctacgatg ggtactacgt actgtcgggtg 60

gagcagtacc ccgagctggc tgacagtgcc aacaacatcc agttcttgcg acaaagtgag 120

atc 123

<210> 59

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse preTCAP3 (129 n.a.)

<400> 59

cagctgctga gcgctggcaa ggtgcagggc tacgatgggt actacgtact gtcgggtggag 60

cagtaccccc agctggctga cagtgccaac aacatccagt tcttgcgaca aagtgagatc 120

ggcaagagg 129

<210> 60

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse preTCAP3 (132 n.a.)

<400> 60

cggcagctgc tgagcgctgg caaggtgcag ggctacgatg ggtactacgt actgtcgggtg 60

gagcagtacc ccgagctggc tgacagtgcc aacaacatcc agttcttgcg acaaagtgag 120

atcggcaaga gg 132

<210> 61

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse TCAP4 (40 a.a.)

<400> 61

Gln	Val	Leu	Asn	Thr	Gly	Arg	Val	Gln	Gly	Tyr	Asp	Gly	Phe	Phe	Val
1				5				10					15		

Thr	Ser	Val	Glu	Gln	Tyr	Pro	Glu	Leu	Ser	Asp	Ser	Ala	Asn	Asn	Ile
			20					25					30		

His	Phe	Met	Arg	Gln	Ser	Glu	Met
		35				40	

<210> 62

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse TCAP4 (41 a.a.)

<400> 62

Gln Gln Val Leu Asn Thr Gly Arg Val Gln Gly Tyr Asp Gly Phe Phe
1 5 10 15

Val Thr Ser Val Glu Gln Tyr Pro Glu Leu Ser Asp Ser Ala Asn Asn
20 25 30

Ile His Phe Met Arg Gln Ser Glu Met
35 40

<210> 63

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse preTCAP4 (43 a.a.)

<400> 63

Gln Val Leu Asn Thr Gly Arg Val Gln Gly Tyr Asp Gly Phe Phe Val
1 5 10 15

Thr Ser Val Glu Gln Tyr Pro Glu Leu Ser Asp Ser Ala Asn Asn Ile
20 25 30

His Phe Met Arg Gln Ser Glu Met Gly Arg Arg
35 40

<210> 64

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Mouse preTCAP4 (44 a.a.)

<400> 64

Gln	Gln	Val	Leu	Asn	Thr	Gly	Arg	Val	Gln	Gly	Tyr	Asp	Gly	Phe	Phe
1				5					10					15	

Val	Thr	Ser	Val	Glu	Gln	Tyr	Pro	Glu	Leu	Ser	Asp	Ser	Ala	Asn	Asn
			20					25					30		

Ile	His	Phe	Met	Arg	Gln	Ser	Glu	Met	Gly	Arg	Arg
		35				40					

<210> 65

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse TCAP4 (120 n.a.)

<400> 65	
caggtgctga acacggggcg ggtgcaaggc tacgacggct tctttgtgac ctcggtcgag	60
cagtaccag aactgtcaga cagcgccaac aatatccact tcatgagaca gagcgagatg	120

<210> 66

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse TCAP4 (123 n.a.)

<400> 66	
cagcaggtgc tgaacacggg gcgggtgcaa ggctacgacg gcttctttgt gacctcggtc	60
gagcagtacc cagaactgtc agacagcgcc aacaatatcc acttcatgag acagagcgag	120
atg	123

<210> 67

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse preTCAP4 (129 n.a.)

<400> 67

caggtgctga acacggggcg ggtgcaaggc tacgacggct tctttgtgac ctcggtcgag 60

cagtaccag aactgtcaga cagcgccaac aatatccact tcatgagaca gagcgagatg 120

ggccgaagg 129

<210> 68

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Mouse preTCAP4 (132 n.a.)

<400> 68

cagcaggtgc tgaacacggg gcgggtgcaa ggctacgacg gcttctttgt gacctcggtc 60

gagcagtacc cagaactgtc agacagcgcc aacaatatcc acttcatgag acagagcgag 120

atgggccgaa gg 132

<210> 69

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Human TCAP1 (40 a.a.)

<400> 69

Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Asp Gly Tyr Phe Val
1 5 10 15

Leu Ser Val Glu Gln Tyr Leu Glu Leu Ser Asp Ser Ala Asn Asn Ile
20 25 30

His Phe Met Arg Gln Ser Glu Ile
35 40

<210> 70

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Human TCAP1 (41 a.a.)

<400> 70

Gln Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Asp Gly Tyr Phe
1 5 10 15

Val Leu Ser Val Glu Gln Tyr Leu Glu Leu Ser Asp Ser Ala Asn Asn
20 25 30

Ile His Phe Met Arg Gln Ser Glu Ile
35 40

<210> 71

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Human preTCAP1 (43 a.a.)

<400> 71

Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Asp Gly Tyr Phe Val
1 5 10 15

Leu Ser Val Glu Gln Tyr Leu Glu Leu Ser Asp Ser Ala Asn Asn Ile
20 25 30

His Phe Met Arg Gln Ser Glu Ile Gly Arg Arg
35 40

<210> 72

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Human preTCAP1 (44 a.a.)

<400> 72

Gln Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Asp Gly Tyr Phe
1 5 10 15

Val Leu Ser Val Glu Gln Tyr Leu Glu Leu Ser Asp Ser Ala Asn Asn
20 25 30

Ile His Phe Met Arg Gln Ser Glu Ile Gly Arg Arg
35 40

<210> 73

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Human TCAP1 (120 n.a.)

<400> 73

cagcttttga gcactgggcg ggtacaaggt tacgatgggt attttgtttt gtctgttgag 60

cagtatttag aactttctga cagtgcgaat aatattcact ttatgagaca gagcgaaata 120

<210> 74

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Human TCAP1 (123 n.a.)

<400> 74

cagcagcttt tgagcactgg gcgggtacaa ggttacgatg ggtattttgt tttgtctggt 60

gagcagtatt tagaactttc tgacagtgcc aataatattc actttatgag acagagcgaa 120

ata 123

<210> 75

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Human preTCAP1 (129 n.a.)

<400> 75

cagcttttga gcaactgggcg ggtacaaggt tacgatgggt attttgtttt gtctgttgag 60

cagtatttag aactttctga cagtgccaat aatattcact ttatgagaca gagcgaaata 120

ggcaggagg 129

<210> 76

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Human preTCAP1 (132 n.a.)

<400> 76

cagcagcttt tgagcactgg gcgggtacaa ggttacgatg ggtattttgt tttgtctggt 60

gagcagtatt tagaactttc tgacagtgcc aataatattc actttatgag acagagcgaa 120

ataggcagga gg 132

<210> 77

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Human TCAP2 (40 a.a.)

<400> 77

Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Glu Gly Tyr Tyr Val
1 5 10 15

Leu Pro Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ser Ser Asn Ile
20 25 30

Gln Phe Leu Arg Gln Asn Glu Met
35 40

<210> 78

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Human preTCAP2 (41 a.a.)

<400> 78

Gln Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Glu Gly Tyr Tyr
1 5 10 15

Val Leu Pro Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ser Ser Asn
20 25 30

Ile Gln Phe Leu Arg Gln Asn Glu Met

35

40

<210> 79

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Human preTCAP2 (43 a.a.)

<400> 79

Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Glu Gly Tyr Tyr Val
1 5 10 15

Leu Pro Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ser Ser Asn Ile
20 25 30

Gln Phe Leu Arg Gln Asn Glu Met Gly Lys Arg
35 40

<210> 80

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Human preTCAP2 (44 a.a.)

<400> 80

Gln Gln Leu Leu Ser Thr Gly Arg Val Gln Gly Tyr Glu Gly Tyr Tyr
1 5 10 15

Val Leu Pro Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ser Ser Asn
20 25 30

Ile Gln Phe Leu Arg Gln Asn Glu Met Gly Lys Arg
35 40

<210> 81

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Human TCAP2 (120 n.a.)

<400> 81

cagcttctga gcaccgggcg cgtgcaaggg tacgagggat attacgtgct tcccgtggag 60

caatacccag agcttgcaga cagtagcagc aacatccagt ttttaagaca gaatgagatg 120

<210> 82

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Human TCAP2 (123 n.a.)

<400> 82

cagcagcttc tgagcaccgg gcgcgtgcaa gggtagcagg gatattacgt gcttcccgtg 60

gagcaatacc cagagcttgc agacagtagc agcaacatcc agtttttaag acagaatgag 120

atg 123

<210> 83

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Human preTCAP2 (129 n.a.)

<400> 83

cagcttctga gcaccgggcg cgtgcaaggg tacgagggat attacgtgct tcccgtggag 60

caataccag agcttgcaga cagtagcagc aacatccagt ttttaagaca gaatgagatg 120
ggaaagagg 129

<210> 84

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Human preTCAP2 (132 n.a.)

<400> 84
cagcagcttc tgagcaccgg gcgcgtgcaa gggtagcagg gatattacgt gcttcccggtg 60
gagcaatacc cagagcttgc agacagtagc agcaacatcc agtttttaag acagaatgag 120
atgggaaaga gg 132

<210> 85

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Human TCAP3 (40 a.a.)

<400> 85

Gln Leu Leu Ser Ala Gly Lys Val Gln Gly Tyr Asp Gly Tyr Tyr Val
1 5 10 15

Leu Ser Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn Ile
20 25 30

Gln Phe Leu Arg Gln Ser Glu Ile
35 40

<210> 86

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Human TCAP3 (41 a.a.)

<400> 86

Arg Gln Leu Leu Ser Ala Gly Lys Val Gln Gly Tyr Asp Gly Tyr Tyr
1 5 10 15

Val Leu Ser Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn
20 25 30

Ile Gln Phe Leu Arg Gln Ser Glu Ile
35 40

<210> 87

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Human preTCAP3 (43 a.a.)

<400> 87

Gln Leu Leu Ser Ala Gly Lys Val Gln Gly Tyr Asp Gly Tyr Tyr Val
1 5 10 15

Leu Ser Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn Ile
20 25 30

Gln Phe Leu Arg Gln Ser Glu Ile Gly Arg Arg
35 40

<210> 88

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Human preTCAP3 (44 a.a.)

<400> 88

Arg Gln Leu Leu Ser Ala Gly Lys Val Gln Gly Tyr Asp Gly Tyr Tyr
1 5 10 15

Val Leu Ser Val Glu Gln Tyr Pro Glu Leu Ala Asp Ser Ala Asn Asn
20 25 30

Ile Gln Phe Leu Arg Gln Ser Glu Ile Gly Arg Arg
35 40

<210> 89

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Human TCAP3 (120 n.a.)

<400> 89

cagctgctga ggcgcggcaa ggtgcagggc tacgacgggt actacgtact ctcggtggag 60

cagtaccccg agctggccga cagcgccaac aacatccagt tcctgcggca gagcgagatc 120

<210> 90

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Human TCAP3 (123 n.a.)

<400> 90

cggcagctgc tgagcgccgg caaggtgcag ggctacgacg ggtactacgt actctcgggtg 60

gagcagtacc ccgagctggc cgacagcgcc aacaacatcc agttcctgcg gcagagcgag 120

atc 123

<210> 91

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Human preTCAP (129 n.a.)

<400> 91

cagctgctga gcgccggcaa ggtgcagggc tacgacgggt actacgtact ctcggtggag 60

cagtaccccg agctggccga cagcgccaac aacatccagt tcctgcggca gagcgagatc 120

ggcaggagg 129

<210> 92

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Human preTCAP3 (132 n.a.)

<400> 92

cggcagctgc tgagcgccgg caaggtgcag ggctacgacg ggtactacgt actctcgggtg 60

gagcagtacc ccgagctggc cgacagcgcc aacaacatcc agttcctgcg gcagagcgag 120

atcggcagga gg 132

<210> 93

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Human TCAP4 (40 a.a.)

<400> 93

Gln Val Leu Ser Thr Gly Arg Val Gln Gly Tyr Asp Gly Phe Phe Val
1 5 10 15

Ile Ser Val Glu Gln Tyr Pro Glu Leu Ser Asp Ser Ala Asn Asn Ile
20 25 30

His Phe Met Arg Gln Ser Glu Met
35 40

<210> 94

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Human TCAP4 (41 a.a.)

<400> 94

Gln Gln Val Leu Ser Thr Gly Arg Val Gln Gly Tyr Asp Gly Phe Phe
1 5 10 15

Val Ile Ser Val Glu Gln Tyr Pro Glu Leu Ser Asp Ser Ala Asn Asn
20 25 30

Ile His Phe Met Arg Gln Ser Glu Met
35 40

<210> 95

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Human preTCAP4 (43 a..a)

<400> 95

Gln Val Leu Ser Thr Gly Arg Val Gln Gly Tyr Asp Gly Phe Phe Val
1 5 10 15

Ile Ser Val Glu Gln Tyr Pro Glu Leu Ser Asp Ser Ala Asn Asn Ile
20 25 30

His Phe Met Arg Gln Ser Glu Met Gly Arg Arg
35 40

<210> 96

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Human preTCAP4 (44 a.a.)

<400> 96

Gln Gln Val Leu Ser Thr Gly Arg Val Gln Gly Tyr Asp Gly Phe Phe
1 5 10 15

Val Ile Ser Val Glu Gln Tyr Pro Glu Leu Ser Asp Ser Ala Asn Asn
20 25 30

Ile His Phe Met Arg Gln Ser Glu Met Gly Arg Arg
35 40

<210> 97

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Human TCAP4 (120 n.a.)

<400> 97

caggtgctga gcacagggcg ggtgcaaggc tacgacggct ttttcgtgat ctctgtcgag

cagtaccag aactgtcaga cagcgccaac aacatccact tcatgagaca gagcgagatg 120

<210> 98

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Human TCAP4 (123 n.a.)

<400> 98

cagcaggtgc tgagcacagg gcgggtgcaa ggctacgacg gctttttcgt gatctctgtc 60

gagcagtacc cagaactgtc agacagcgcc aacaacatcc acttcatgag acagagcgag 120

atg 123

<210> 99

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Human preTCAP4 (129 n.a.)

<400> 99

caggtgctga gcacagggcg ggtgcaaggc tacgacggct ttttcgtgat ctctgtcgag 60

cagtaccag aactgtcaga cagcgccaac aacatccact tcatgagaca gagcgagatg 120

ggccggagg 129

<210> 100

<211> 132

<212> DNA

<213> Artificial Sequence

<220>

<223> Human preTCAP4 (132 n.a.)

<400> 100

cagcaggtgc tgagcacagg gcgggtgcaa ggctacgacg gctttttcgt gatctctgtc 60

gagcagtacc cagaactgtc agacagcgcc aacaacatcc acttcatgag acagagcgag 120

atgggccgga gg 132

<210> 101

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> G. gallus TCAP-1

<400> 101

Gln Gln Leu Leu Asn Thr Gly Arg Val Gln Gly Tyr Asp Gly Tyr Phe
1 5 10 15

Val Leu Ser Val Glu Gln Tyr Leu Glu Leu Ser Asp Ser Ala Asn Asn
20 25 30

Ile His Phe Met Arg Gln Ser Glu Ile
35 40

<210> 102

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Zebrafish TCAP-4

<400> 102

Gln Gln Leu Leu Ser Ser Gly Arg Val Gln Gly Tyr Glu Gly Phe Tyr
1 5 10 15

Ile Val Ser Val Asp Gln Phe Pro Glu Leu Thr Asp Asn Ile Asn Asn

20 25 30

Val His Phe Trp Arg Gln Thr Glu Met
35 40

<210> 103

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> D. melanogaster Ten-m gene product

<400> 103

Glu Leu Val Gln His Gly Asp Val Asp Gly Trp Asn Gly Asp Ile His
1 5 10 15

Ser Ile His Lys Tyr Pro Gln Leu Ala Asp Pro Gly Asn Val Ala Phe
20 25 30

Gln Arg Asp Ala Lys
35

<210> 104

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Human CRF TCAP like region

<400> 104

Ser Glu Glu Pro Pro Ile Ser Leu Asp Leu Thr Phe His Leu Leu Arg
1 5 10 15

Glu Val Leu Glu Met Ala Arg Ala Glu Gln Leu Ala Gln Gln Ala His
20 25 30

Ser Asn Arg Lys Leu Met Glu Ile Ile
35 40

<210> 105

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Human urocortin TCAP-like region

<400> 105

Asp Asn Pro Ser Leu Ser Ile Asp Leu Thr Phe His Leu Leu Arg Thr
1 5 10 15

Leu Leu Glu Leu Ala Arg Thr Gln Ser Gln Arg Glu Arg Ala Glu Gln
20 25 30

Asn Arg Ile Ile Phe Asp Ser Val
35 40

<210> 106

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Human urocortin 2 TCAP-like region

<400> 106

Ile Val Leu Ser Leu Asp Val Pro Ile Gly Leu Leu Gln Ile Leu Leu
1 5 10 15

Glu Gln Ala Arg Ala Arg Ala Ala Arg Glu Gln Ala Thr Thr Asn Ala
20 25 30

Arg Ile Leu Ala Arg Val
35

<210> 107

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Human urocortin 3 TCAP=like region

<400> 107

Phe	Thr	Leu	Ser	Leu	Asp	Val	Pro	Thr	Asn	Ile	Met	Asn	Leu	Leu	Phe
1				5					10					15	

Asn	Ile	Ala	Lys	Ala	Lys	Asn	Leu	Arg	Ala	Gln	Ala	Ala	Ala	Asn	Ala
			20					25					30		

His	Leu	Met	Ala	Gln	Ile
		35			

<210> 108

<211> 46

<212> PRT

<213> Artificial Sequence

<220>

<223> L. migratoria DP

<400> 108

Met	Gly	Met	Gly	Pro	Ser	Leu	Ser	Ile	Val	Asn	Pro	Met	Asp	Val	Leu
1				5					10					15	

Arg	Gln	Arg	Leu	Leu	Leu	Glu	Ile	Ala	Arg	Arg	Arg	Leu	Arg	Asp	Ala
			20					25					30		

Glu	Glu	Gln	Ile	Lys	Ala	Asn	Lys	Asp	Phe	Leu	Gln	Gln	Ile
		35					40					45	

<210> 109

<211> 46

<212> PRT

<213> Artificial Sequence

<220>

<223> A. domesticus DP

<400> 109

Thr Gly Ala Gln Ser Leu Ser Ile Val Ala Pro Leu Asp Val Leu Arg
1 5 10 15

Gln Arg Leu Met Asn Glu Leu Asn Arg Arg Arg Met Arg Glu Leu Gln
20 25 30

Gly Ser Arg Ile Gln Gln Asn Arg Gln Leu Leu Thr Ser Ile
35 40 45

<210> 110

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> T. molitor DP

<400> 110

Ser Pro Thr Ile Ser Ile Thr Ala Pro Ile Asp Val Leu Arg Lys Thr
1 5 10 15

Trp Glu Gln Glu Arg Ala Arg Lys Gln Met Val Ala Gln Asn Asn Arg
20 25 30

Glu Phe Leu Asn Ser Leu Asn
35

<210> 111

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> M. sexta DP-1

<400> 111

Arg	Met	Pro	Ser	Leu	Ser	Ile	Asp	Leu	Pro	Met	Ser	Val	Leu	Arg	Gln
1				5				10					15		

Lys	Leu	Ser	Leu	Glu	Lys	Glu	Arg	Lys	Val	His	Ala	Leu	Arg	Ala	Ala
			20					25					30		

Ala	Asn	Arg	Asn	Phe	Leu	Asn	Asp	Ile
		35					40	

<210> 112

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> M. sexta DP-II

<400> 112

Ser	Leu	Ser	Val	Asn	Pro	Ala	Val	Asp	Ile	Leu	Gln	His	Arg	Tyr	Met
1				5				10					15		

Glu	Lys	Val	Ala	Gln	Asn	Asn	Arg	Asn	Phe	Leu	Asn	Arg	Val
			20					25					30

<210> 113

<211> 45

<212> PRT

<213> Artificial Sequence

<220>

<223> P. Americana

<400> 113

Thr Gly Ser Gly Pro Ser Leu Ser Ile Val Asn Pro Leu Asp Val Leu
1 5 10 15

Arg Gln Arg Leu Leu Leu Glu Ile Ala Arg Arg Arg Met Arg Gln Ser
20 25 30

Gln Asp Gln Ile Gln Asn Arg Glu Ile Leu Gln Thr Ile
35 40 45

<210> 114

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> O. keta CRP

<400> 114

Ser Asp Asp Pro Pro Ile Ser Leu Asp Leu Thr Phe His Met Leu Arg
1 5 10 15

Gln Met Asn Glu Met Ser Arg Ala Glu Gln Leu Gln Gln Gln Ala His
20 25 30

Ser Asn Arg Lys Met Met Glu Ile Phe
35 40

<210> 115

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> R. norvegicus

<400> 115

Asp Asp Pro Pro Leu Ser Ile Asp Leu Thr Phe His Leu Leu Arg Thr
1 5 10 15

Leu Leu Glu Leu Ala Arg Thr Gln Ser Gln Arg Glu Arg Ala Glu Gln
20 25 30

Asn Arg Ile Ile Phe Asp Ser Val
35 40

<210> 116

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> P. sauvageii

<400> 116

Gln Gly Pro Pro Ile Ser Ile Asp Leu Ser Leu Glu Leu Leu Arg Lys
1 5 10 15

Met Ile Glu Ile Glu Lys Gln Glu Lys Glu Lys Gln Gln Ala Ala Asn
20 25 30

Asn Arg Leu Leu Leu
35

<210> 117

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> C. carpio US

<400> 117

Asn Asp Asp Pro Pro Ile Ser Ile Asp Leu Thr Phe His Leu Leu Arg
1 5 10 15

Asn Met Ile Glu Met Ala Arg Asn Glu Asn Gln Arg Glu Gln Ala Gly
20 25 30

Leu Asn Arg Lys Tyr Leu Asp Glu Val
35 40

<210> 118

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> M. Musculus UCN2

<400> 118

Val Ile Leu Ser Leu Asp Val Pro Ile Gly Leu Leu Arg Ile Leu Leu
1 5 10 15

Glu Gln Ala Arg Tyr Lys Ala Ala Arg Asn Gln Ala Ala Thr Asn Ala
20 25 30

Gln Ile Leu Ala His Val
35

<210> 119

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> R. dano UCN2

<400> 119

Leu Thr Leu Ser Leu Asp Val Pro Thr Asn Ile Met Asn Val Leu Phe
1 5 10 15

Asp Val Ala Lys Ala Lys Asn Leu Arg Ala Lys Ala Ala Glu Asn Ala

20

25

30

Arg Leu Leu Ala His Ile
35

<210> 120

<211> 305

<212> DNA

<213> Artificial Sequence

<220>

<223> Hamster 305bp urocortin cDNA probe examples "cloning mRNA"

<400> 120
attcaccgcc gctcgggata tgagcctgca ggcgagcggc agcgacggga agaccttccg 60
ctgtccatcg acctcacatt ccacctgcta cggaccctgc tggagatggc ccggacacag 120
agccaacgcg agcgagcaga gcagaaccga atcataactca acgcggtggg caagtgatcg 180
gcccgggtgtg ggacccccaaa aggctcgacc ctttccccta cctaccccgg ggctgaagtc 240
acgcgaccga agtcggctta gtcccgcggt gcagcgccctc ccagagttac cctgaacaat 300
cccgc 305

<210> 121

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> TCAP1 fwd primer

<400> 121
acgtcagtgt tgatgggagg acta 24

<210> 122

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> TCAP1 rvs primer

<400> 122

cctcctgcct atttcactct gtctcat

27

<210> 123

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> TCAP2 Fwd primer

<400> 123

tcgagggcaa ggacacacac tactt

25

<210> 124

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> TCAP2 rvs primer

<400> 124

aagaactgga tggtgctgct actgtc

26

<210> 125

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> TCAP3 fwd primer

<400> 125
caacaacgcc ttctacctgg agaac 25

<210> 126

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> TCAP3 rvs primer

<400> 126
tggtgttgcc actgtcagcc a 21

<210> 127

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> TCAP4 fwd primer

<400> 127
tttgcccca gtggttccat ctt 23

<210> 128

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> TCAP4 rvs primer

<400> 128
tggatattgt tggcgctgtc tgac 24

<210> 129

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Conserved motif between CRF and TCAP I/L S X X (X)-L/V at amino
terminus

<220>

<221> MISC_FEATURE

<222> (1) .. (1)

<223> X=I or L

<220>

<221> MISC_FEATURE

<222> (3) .. (3)

<223> X=T or A

<220>

<221> MISC_FEATURE

<222> (4) .. (4)

<223> X=L, I or G

<220>

<221> MISC_FEATURE

<222> (5) .. (5)

<223> X=D, R or K

<220>

<221> MISC_FEATURE

<222> (6)..(6)

<223> X=L or V

<400> 129

Xaa Ser Xaa Xaa Xaa Xaa
1 5

<210> 130

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Conserved motif between CRF and TCAP - In middle L/V-L/I-X-V/aliphatic residue

<220>

<221> MISC_FEATURE

<222> (1)..(1)

<223> X=V or L

<220>

<221> MISC_FEATURE

<222> (4)..(4)

<223> X=M, L Q, I or V

<220>

<221> MISC_FEATURE

<222> (2)..(2)

<223> X=L, I or F

<220>

<221> MISC_FEATURE

<222> (3) .. (3)

<223> X=E, N, S or P

<400> 130

Xaa Xaa Xaa Xaa

1

<210> 131

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Conserved motif between CRF and TCAP N/I/A-H/basic residue -I/L/F
/-aliphatic at carboxy terminus

<220>

<221> MISC_FEATURE

<222> (2) .. (2)

<223> X=R, A or I

<220>

<221> MISC_FEATURE

<222> (3) .. (3)

<223> X=H or basic residues, K, I, R or Q

<220>

<221> MISC_FEATURE

<222> (4) .. (4)

<223> X=I, L or F

<400> 131

Asn Xaa Xaa Xaa
1

<210> 132

<211> 8964

<212> DNA

<213> Mus musculus

<220>

<221> exon

<222> (50)..(8197)

<223>

<400> 132

aagttctaag aagccggacc gatgtgcaca gagaaggaat gaaggaagt atg gat gtg	58
Met Asp Val	
1	

aag gaa cgc agg cct tac tgc tcc ttg acc aag agc aga cgg gaa aag	106
Lys Glu Arg Arg Pro Tyr Cys Ser Leu Thr Lys Ser Arg Arg Glu Lys	
5 10 15	

gaa agg cgc tat aca aat tcg tcc gcg gac aat gag gag tgt agg gtc	154
Glu Arg Arg Tyr Thr Asn Ser Ser Ala Asp Asn Glu Glu Cys Arg Val	
20 25 30 35	

ccc acg cag aag tcc tat agt tcc agt gaa acc ttg aaa gct ttc gat	202
Pro Thr Gln Lys Ser Tyr Ser Ser Ser Glu Thr Leu Lys Ala Phe Asp	
40 45 50	

cat gat tat tca cgg ctg ctt tat gga aac aga gta aag gat ttg gtc	250
His Asp Tyr Ser Arg Leu Leu Tyr Gly Asn Arg Val Lys Asp Leu Val	
55 60 65	

cac aga gaa gcc gac gag tat act aga caa gga cag aat ttt acc cta	298
His Arg Glu Ala Asp Glu Tyr Thr Arg Gln Gly Gln Asn Phe Thr Leu	
70 75 80	

agg cag tta gga gtg tgt gaa tcc gca act cga aga gga gtg gca ttc	346
Arg Gln Leu Gly Val Cys Glu Ser Ala Thr Arg Arg Gly Val Ala Phe	
85 90 95	

tgt gcg gaa atg ggg ctc cct cac aga ggt tac tcc atc agt gca ggg	394
Cys Ala Glu Met Gly Leu Pro His Arg Gly Tyr Ser Ile Ser Ala Gly	

100					105					110					115	
tca	gat	gcg	gat	acg	gaa	aac	gaa	gca	gtg	atg	tcc	cct	gag	cat	gcc	442
Ser	Asp	Ala	Asp	Thr	Glu	Asn	Glu	Ala	Val	Met	Ser	Pro	Glu	His	Ala	
				120					125					130		
atg	aga	ctt	tgg	ggc	agg	ggg	gtc	aaa	tcg	ggc	cgc	agt	tcc	tgc	ctg	490
Met	Arg	Leu	Trp	Gly	Arg	Gly	Val	Lys	Ser	Gly	Arg	Ser	Ser	Cys	Leu	
			135					140					145			
tca	agc	cgg	tcc	aac	tcc	gcc	ctc	acc	ctg	aca	gac	acg	gag	cac	gag	538
Ser	Ser	Arg	Ser	Asn	Ser	Ala	Leu	Thr	Leu	Thr	Asp	Thr	Glu	His	Glu	
		150					155					160				
aac	agg	tcg	gac	agt	gag	agc	gag	caa	cct	tca	aac	aac	cca	ggg	caa	586
Asn	Arg	Ser	Asp	Ser	Glu	Ser	Glu	Gln	Pro	Ser	Asn	Asn	Pro	Gly	Gln	
	165					170					175					
ccc	acc	ctg	cag	cct	ttg	ccg	cca	tcc	cac	aag	cag	cac	ccg	gcg	cag	634
Pro	Thr	Leu	Gln	Pro	Leu	Pro	Pro	Ser	His	Lys	Gln	His	Pro	Ala	Gln	
180					185					190					195	
cat	cac	ccg	tcc	atc	act	tcc	ctc	aat	aga	aac	tcc	ctg	acc	aat	aga	682
His	His	Pro	Ser	Ile	Thr	Ser	Leu	Asn	Arg	Asn	Ser	Leu	Thr	Asn	Arg	
				200					205					210		
agg	aac	cag	agt	ccg	gcc	ccg	ccg	gct	gct	ttg	ccc	gcc	gag	ctg	caa	730
Arg	Asn	Gln	Ser	Pro	Ala	Pro	Pro	Ala	Ala	Leu	Pro	Ala	Glu	Leu	Gln	
			215					220				225				
acc	aca	ccc	gag	tcc	gtc	cag	ctg	cag	gac	agc	tgg	gtc	ctt	ggc	agt	778
Thr	Thr	Pro	Glu	Ser	Val	Gln	Leu	Gln	Asp	Ser	Trp	Val	Leu	Gly	Ser	
		230					235					240				
aat	gta	cca	ctg	gaa	agc	agg	cat	ttc	cta	ttc	aaa	aca	ggg	aca	ggg	826
Asn	Val	Pro	Leu	Glu	Ser	Arg	His	Phe	Leu	Phe	Lys	Thr	Gly	Thr	Gly	
	245					250					255					
acg	acg	cca	ctg	ttc	agt	acg	gca	acc	ccg	gga	tac	aca	atg	gca	tct	874
Thr	Thr	Pro	Leu	Phe	Ser	Thr	Ala	Thr	Pro	Gly	Tyr	Thr	Met	Ala	Ser	
260					265					270					275	
ggc	tct	gtt	tat	tct	ccg	cct	acc	cgg	cca	ctt	cct	aga	aac	acc	cta	922
Gly	Ser	Val	Tyr	Ser	Pro	Pro	Thr	Arg	Pro	Leu	Pro	Arg	Asn	Thr	Leu	
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Ser	Arg	Ser	Ala	Phe	Lys	Phe	Lys	Lys	Ser	Ser	Lys	Tyr	Cys	Ser	Trp	
			295					300					305			
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Arg	Cys	Thr	Ala	Leu	Cys	Ala	Val	Gly	Val	Ser	Val	Leu	Leu	Ala	Ile	
		310					315					320				
ctc	ctc	tcc	tat	ttt	ata	gca	atg	cat	cta	ttt	ggc	ctc	aac	tgg	cac	1066
Leu	Leu	Ser	Tyr	Phe	Ile	Ala	Met	His	Leu	Phe	Gly	Leu	Asn	Trp	His	
		325					330				335					
tta	cag	cag	acg	gaa	aat	gac	aca	ttc	gag	aat	gga	aaa	gtg	aat	tct	1114

Leu 340	Gln	Gln	Thr	Glu	Asn 345	Asp	Thr	Phe	Glu	Asn 350	Gly	Lys	Val	Asn	Ser 355	
gac	acc	gtg	cca	aca	aac	act	gta	tcg	tta	cct	tct	ggc	gac	aat	gga	1162
Asp	Thr	Val	Pro	Thr	Asn	Thr	Val	Ser	Leu	Pro	Ser	Gly	Asp	Asn	Gly	
				360					365					370		
aaa	tta	ggt	gga	ttt	aca	cat	gaa	aat	aac	acc	ata	gat	tcc	gga	gaa	1210
Lys	Leu	Gly	Gly	Phe	Thr	His	Glu	Asn	Asn	Thr	Ile	Asp	Ser	Gly	Glu	
			375					380					385			
ctt	gat	att	ggc	cgg	aga	gca	att	caa	gag	gtt	ccc	ccc	ggg	atc	ttc	1258
Leu	Asp	Ile	Gly	Arg	Arg	Ala	Ile	Gln	Glu	Val	Pro	Pro	Gly	Ile	Phe	
		390					395					400				
tgg	aga	tcg	cag	ctc	ttt	att	gat	cag	cca	cag	ttt	ctt	aag	ttc	aac	1306
Trp	Arg	Ser	Gln	Leu	Phe	Ile	Asp	Gln	Pro	Gln	Phe	Leu	Lys	Phe	Asn	
	405					410					415					
atc	tct	ctt	cag	aag	gat	gca	ttg	atc	gga	gtg	tac	ggc	cgg	aag	ggc	1354
Ile	Ser	Leu	Gln	Lys	Asp	Ala	Leu	Ile	Gly	Val	Tyr	Gly	Arg	Lys	Gly	
420					425					430					435	
tta	ccg	cct	tcc	cat	act	cag	tac	gac	ttt	gtg	gaa	cta	ctg	gat	ggt	1402
Leu	Pro	Pro	Ser	His	Thr	Gln	Tyr	Asp	Phe	Val	Glu	Leu	Leu	Asp	Gly	
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agc	agg	tta	att	gcg	aga	gag	cag	cgg	aac	ctg	gtg	gag	tcc	gaa	aga	1450
Ser	Arg	Leu	Ile	Ala	Arg	Glu	Gln	Arg	Asn	Leu	Val	Glu	Ser	Glu	Arg	
			455					460					465			
gcc	ggg	cgg	cag	gcg	aga	tct	gtc	agc	ctg	cac	gaa	gct	ggc	ttc	atc	1498
Ala	Gly	Arg	Gln	Ala	Arg	Ser	Val	Ser	Leu	His	Glu	Ala	Gly	Phe	Ile	
		470					475					480				
cag	tac	ttg	gat	tct	gga	atc	tgg	cat	ctg	gct	ttt	tat	aac	gac	ggg	1546
Gln	Tyr	Leu	Asp	Ser	Gly	Ile	Trp	His	Leu	Ala	Phe	Tyr	Asn	Asp	Gly	
	485					490					495					
aaa	aac	cca	gag	cag	gtc	tcc	ttt	aac	acg	atc	gtt	ata	gag	tct	gtg	1594
Lys	Asn	Pro	Glu	Gln	Val	Ser	Phe	Asn	Thr	Ile	Val	Ile	Glu	Ser	Val	
500					505					510					515	
gtg	gaa	tgc	ccc	cga	aat	tgc	cat	gga	aat	gga	gag	tgt	gtt	tct	gga	1642
Val	Glu	Cys	Pro	Arg	Asn	Cys	His	Gly	Asn	Gly	Glu	Cys	Val	Ser	Gly	
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act	tgc	cat	tgt	ttc	ccc	ggg	ttt	cta	ggt	ccg	gat	tgt	tca	aga	gca	1690
Thr	Cys	His	Cys	Phe	Pro	Gly	Phe	Leu	Gly	Pro	Asp	Cys	Ser	Arg	Ala	
			535					540					545			
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Ala	Cys	Pro	Val	Leu	Cys	Ser	Gly	Asn	Gly	Gln	Tyr	Ser	Lys	Gly	Arg	
		550					555					560				
tgc	ctg	tgc	ttc	agt	ggc	tgg	aag	ggc	acc	gag	tgt	gac	gtg	ccg	acg	1786
Cys	Leu	Cys	Phe	Ser	Gly	Trp	Lys	Gly	Thr	Glu	Cys	Asp	Val	Pro	Thr	
	565					570					575					

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Thr	Gln	Cys	Ile	Asp	Pro	Gln	Cys	Gly	Gly	Arg	Gly	Ile	Cys	Ile	Met	
580					585					590					595	
ggc	tct	tgc	gct	tgt	aac	tcg	gga	tac	aaa	gga	gaa	aac	tgt	gag	gaa	1882
Gly	Ser	Cys	Ala	Cys	Asn	Ser	Gly	Tyr	Lys	Gly	Glu	Asn	Cys	Glu	Glu	
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gcg	gac	tgt	cta	gac	cct	gga	tgt	tct	aat	cac	ggg	gtg	tgt	atc	cat	1930
Ala	Asp	Cys	Leu	Asp	Pro	Gly	Cys	Ser	Asn	His	Gly	Val	Cys	Ile	His	
			615					620					625			
ggg	gaa	tgt	cac	tgc	aat	cca	ggc	tgg	ggt	ggc	agc	aac	tgt	gaa	ata	1978
Gly	Glu	Cys	His	Cys	Asn	Pro	Gly	Trp	Gly	Gly	Ser	Asn	Cys	Glu	Ile	
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Gln	Glu	Ser	Gly	Ser	Cys	Thr	Cys	Asp	Pro	Asn	Trp	Thr	Gly	Pro	Asp	
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tgc	tca	aat	gaa	ata	tgt	tca	gtg	gac	tgc	ggc	tca	cac	ggc	gtc	tgc	2122
Cys	Ser	Asn	Glu	Ile	Cys	Ser	Val	Asp	Cys	Gly	Ser	His	Gly	Val	Cys	
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Met	Gly	Gly	Ser	Cys	Arg	Cys	Glu	Glu	Gly	Trp	Thr	Gly	Pro	Ala	Cys	
			695				700						705			
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Asn	Gln	Arg	Ala	Cys	His	Pro	Arg	Cys	Ala	Glu	His	Gly	Thr	Cys	Lys	
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Ile	Ala	His	Tyr	Leu	Asp	Lys	Ile	Val	Lys	Glu	Gly	Cys	Pro	Gly	Leu	
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			775					780					785			
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Thr	Leu	Cys	Thr	Asp	Ser	Lys	Asp	Asn	Glu	Gly	Asp	Gly	Leu	Ile	Asp	
		790					795					800				
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Cys	Met	Asp	Pro	Asp	Cys	Cys	Leu	Gln	Ser	Ser	Cys	Gln	Asn	Gln	Pro	
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Tyr	Cys	Arg	Gly	Leu	Pro	Asp	Pro	Gln	Asp	Ile	Ile	Ser	Gln	Ser	Leu	
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Gln	Thr	Pro	Ser	Gln	Gln	Ala	Ala	Lys	Ser	Phe	Tyr	Asp	Arg	Ile	Ser	
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Phe	Leu	Ile	Gly	Ser	Asp	Ser	Thr	His	Val	Leu	Pro	Gly	Glu	Ser	Pro	
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Phe	Asn	Lys	Ser	Leu	Ala	Ser	Val	Ile	Arg	Gly	Gln	Val	Leu	Thr	Ala	
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Leu	Thr	Gln	Tyr	His	Thr	Val	Trp	Ile	Pro	Trp	Asn	Val	Phe	Tyr	Val	
			935					940					945			
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Met	Asp	Thr	Leu	Val	Met	Lys	Lys	Glu	Glu	Asn	Asp	Ile	Pro	Ser	Cys	
		950					955					960				
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Glu	Thr	Gln	Val	Leu	His	Glu	Glu	Thr	Thr	Ile	Pro	Gly	Thr	Asp		
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Leu	Lys	Leu	Ser	Tyr	Leu	Ser	Ser	Arg	Ala	Ala	Gly	Tyr	Lys	Ser		
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Val	Leu	Lys	Ile	Thr	Met	Thr	Gln	Ala	Val	Ile	Pro	Phe	Asn	Leu		
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Met	Lys	Val	His	Leu	Met	Val	Ala	Val	Val	Gly	Arg	Leu	Phe	Gln		

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Lys	Trp	Phe	Pro	Ala	Ser	Pro	Asn	Leu	Ala	Tyr	Thr	Phe	Ile	Trp						
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Ala	Val	Val	Ser	Val	Gly	Tyr	Glu	Tyr	Glu	Ser	Cys	Leu	Asp	Leu						
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Asp	Ala	Ser	Asn	Met	Gly	Gly	Trp	Thr	Leu	Asp	Lys	His	His	Val						
1120										1125					1130					
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1180										1185					1190					
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1195										1200					1205					
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Lys	Asp	Phe	Arg	His	Ser	Ser	Asn	Pro	Ala	His	Arg	Tyr	Tyr	Leu						
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Gln	Asn	Gly	Ile	Ile	Ser	Thr	Leu	Leu	Gly	Ser	Asn	Asp	Leu	Thr	
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Ser	Ala	Arg	Pro	Leu	Thr	Cys	Asp	Thr	Ser	Met	His	Ile	Ser	Gln	
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Val	Arg	Leu	Glu	Trp	Pro	Thr	Asp	Leu	Ala	Ile	Asn	Pro	Met	Asp	
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Glu	Asn	Arg	Gln	Val	Arg	Ile	Ala	Ala	Gly	Arg	Pro	Met	His	Cys	
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Gln	Val	Pro	Gly	Val	Glu	Tyr	Pro	Val	Gly	Lys	His	Ala	Val	Gln	
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Thr	Thr	Leu	Glu	Ser	Ala	Thr	Ala	Ile	Ala	Val	Ser	Tyr	Ser	Gly	
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Val	Leu	Tyr	Ile	Thr	Glu	Thr	Asp	Glu	Lys	Lys	Ile	Asn	Arg	Ile	
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Arg	Gln	Val	Thr	Thr	Asp	Gly	Glu	Ile	Ser	Leu	Val	Ala	Gly	Ile	
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Pro	Ser	Glu	Cys	Asp	Cys	Lys	Asn	Asp	Ala	Asn	Cys	Asp	Cys	Tyr	
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Gln	Ser	Gly	Asp	Gly	Tyr	Ala	Lys	Asp	Ala	Lys	Leu	Asn	Ala	Pro	
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Ser Ser Leu Ala Ala	Ser Pro Asp Gly Thr	Leu Tyr Ile Ala Asp	
1495	1500	1505	
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Leu Gly Asn Ile Arg	Ile Arg Ala Val Ser	Lys Asn Lys Pro Leu	
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ctg aac tca atg aac	ttt tac gaa gtt gcc	tct cca act gat caa	4654
Leu Asn Ser Met Asn	Phe Tyr Glu Val Ala	Ser Pro Thr Asp Gln	
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Glu Leu Tyr Ile Phe	Asp Ile Asn Gly Thr	His Gln Tyr Thr Val	
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agc ctg gtc acg ggt	gac tac cta tat aat	ttt agt tac agc aat	4744
Ser Leu Val Thr Gly	Asp Tyr Leu Tyr Asn	Phe Ser Tyr Ser Asn	
1555	1560	1565	
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Asp Asn Asp Val Thr	Ala Val Thr Asp Ser	Asn Gly Asn Thr Leu	
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Arg Ile Arg Arg Asp	Pro Asn Arg Met Pro	Val Arg Val Val Ser	
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Pro Asp Asn Gln Val	Ile Trp Leu Thr Ile	Gly Thr Asn Gly Cys	
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ctg aaa agc atg acc	gct cag ggc ctg gaa	ctg gtt ttg ttt act	4924
Leu Lys Ser Met Thr	Ala Gln Gly Leu Glu	Leu Val Leu Phe Thr	
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Tyr His Gly Asn Ser	Gly Leu Leu Ala Thr	Lys Ser Asp Glu Thr	
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Gly Trp Thr Thr Phe	Phe Asp Tyr Asp Ser	Glu Gly Arg Leu Thr	
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Asn Val Thr Phe Pro	Thr Gly Val Val Thr	Asn Leu His Gly Asp	
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Glu Asp Val Ser Ile	Thr Ser Asn Leu Ser	Ser Ile Asp Ser Phe	
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Tyr Thr Met Val Gln	Asp Gln Leu Arg Asn	Ser Tyr Gln Ile Gly	
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tat gat ggc tcc ctt	aga atc ttc tat gcc	agt ggt ctg gac tct	5239
Tyr Asp Gly Ser Leu	Arg Ile Phe Tyr Ala	Ser Gly Leu Asp Ser	
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His Tyr Gln Thr Glu	Pro His Val Leu Ala	Gly Thr Ala Asn Pro	
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Thr Val Ala Lys Arg	Asn Met Thr Leu Pro	Gly Glu Asn Gly Gln	
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Pro Ser Val Ala Arg	His Thr Met Gln Thr	Ile Arg Ser Ile Gly	
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Arg Leu Ser Glu Ile Leu Tyr Asp Ser Thr Arg Val Ser Phe Thr				
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Tyr Asp Glu Thr Ala Gly Val Leu Lys Thr Val Asn Leu Gln Ser				
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Asp Gly Phe Ile Cys Thr Ile Arg Tyr Arg Gln Ile Gly Pro Leu				
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Ala Arg Phe Asp Tyr Ser Tyr Asp Asn Ser Phe Arg Val Thr Ser				
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Met Gln Gly Val Ile Asn Glu Thr Pro Leu Pro Ile Asp Leu Tyr				
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Gln Phe Asp Asp Ile Ser Gly Lys Val Glu Gln Phe Gly Lys Phe				
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Gly Val Ile Tyr Tyr Asp Ile Asn Gln Ile Ile Ser Thr Ala Val				
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Met Thr Tyr Thr Lys His Phe Asp Ala His Gly Arg Ile Lys Glu				
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Ile Gln Tyr Glu Ile Phe Arg Ser Leu Met Tyr Trp Ile Thr Ile				
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Gln Tyr Asp Asn Met Gly Arg Val Thr Lys Arg Glu Ile Lys Ile				
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Gly Pro Phe Ala Asn Thr Thr Lys Tyr Ala Tyr Glu Tyr Asp Val				
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Asp Gly Gln Leu Gln Thr Val Tyr Leu Asn Glu Lys Ile Met Trp	
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Leu	Ser	Xaa	Glu	Gln	Tyr	Pro	Glu	Leu	Ala	Asp	Ser	Ala	Asn	Asn	Xaa
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Gln	Tyr	Pro	Glu	Leu	Ala	Asp	Ser	Ser	Ser	Asn	Ile	Gln	Phe	Leu	Arg
			20					25					30		

Gln	Asn	Glu	Met
		35	